



SUCCESS STORY

Integrated Farming System (IFS) Model is the Key to Farmer Success.

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Background:

In India, land holding is reducing day by day due to fragmentation of landholdings and increasing population. Traditionally practiced monocropping by farmers is not profitable or sustainable in these circumstances. KVK is promoting crop, horticulture, dairy and enterprise based integrated farming system models in KVK Ahilyanagar jurisdictions for ensuring continuous sustainable income to the farmers. KVK scientists guided one of the farmer namely Mr. Shankar Bihari Jadhav of Bhavi nimgaon Village in Shevgaon block of Ahilyanagar district in Maharashtra.

Mr. Shankar Jadhav has completed his education up to B.Sc. and retired from the Department of Health, Government of Maharashtra. He owns a total of 4.80 ha of land. The farm of Shri Shankar Jadhav is located only 3 km from Krishi Vigyan Kendra, Dahigaon Ne. Since the establishment of KVK Dahigaon Ne in 2012, Mr. Jadhav has been in contact with Shri Marutrao Ghule Patil Shikshan Sanstha Krishi Vigyan Kendra, Dahigaon Ne.

Mr. Jadhav was practicing traditional farming until his retirement. He did not know advanced or modern production technologies, how to sell his agricultural produce at lucrative prices, or how to make agriculture a professional business. Mr. Jadhav came into contact with KVK after his retirement from the government job in the year 2020 and increased his involvement in various extension activities organized by KVK, such as training programmes, farmer-scientist interactions, ex-trainees' meets, innovative farmers' meets, field visits, KVK farm visits, diagnostic visits, etc.

He is adopting all the innovative technologies in integration, viz., improved seed, seed treatment with biological as well as chemical agents, integrated plant nutrient management, integrated water management, mechanization to minimize labour costs, integrated weed management, integrated pest management including biopesticides, biological inputs such as Dashparni, Neemark, traps as well as agrochemicals in his field. Most of these inputs are easily available to Mr. Jadhav at affordable rates from KVK.

Earlier, under traditional farming practices, he was not getting much profit from his farm. Therefore, Mr. Jadhav's family was not very much satisfied with farming.

KVK's Intervention

The farmer came into contact with KVK in the year 2020, and KVK scientists provided all sorts of support. Initially, they suggested that he change his cropping pattern by incorporating horticultural crops. For knowledge and skill upgradation, the farmer attended training programmes on several aspects, viz., pomegranate production and marketing of his own agricultural produce. Besides this, the farmer was also provided with timely technical advice, which helped him in proper planning.

Earlier, the farmer was growing traditional crops, viz., cotton, sugarcane, wheat, etc., but after coming into contact with KVK scientists, he was advised to include horticultural crops such as pomegranate (variety Bhagawa), ginger (variety Mahim), onion, and onion seed

production in his cropping pattern. Mr. Jadhav is also preparing and using Jivamrut in all crops grown on his farm to reduce the cost of production and ensure a balanced supply of nutrients. He also started using improved sugarcane seed, which is easily available from KVK Dahigaon Ne.

The details of economic analysis before KVK,s intervention is given as follows:-

Economic performance of farmers before KVK's intervention:-

| Sl. No. | Crop | Variety | Area (ha) | Gross Production (q) | Production (q/ha) | Gross Income (Rs/ha) | Net Income (Rs/ha) | B: C Ratio |
|---------|-----------|----------------|------------|----------------------|-------------------|----------------------|--------------------|------------|
| 1 | Cotton | Mahyco-Dhandev | 1.4 | 73.15 | 16.25 | 117000 | 56500 | 1.93 |
| 2 | Sugarcane | Co. M.-0265 | 1.8 | 2700 | 1500 | 375000 | 231000 | 2.60 |
| 3 | Onion | Local Fursungi | 1 | 250 | 250 | 250000 | 110000 | 1.79 |
| 4 | Wheat | GW-496 | 0.4 | 14 | 35 | 70000 | 34600 | 1.98 |
| | | Total | 4.6 | 3037.15 | 1801.25 | 812000 | 432100 | |

Output: The KVK's intervention resulted in a change in the cropping pattern of the farmer, which ultimately led to better utilization of the available natural as well as human resources. Mr. Jadhav is now convinced to grow horticultural cash crops like pomegranate, ginger, onion, and onion seed crops to diversify his farming system instead of practicing traditional methods. The cultivation of turmeric and ginger, as suggested by KVK, resulted in crop rotation and increased income. The adoption of a centralized fertilization system resulted in an increase in the irrigated area using the same amount of water by improving water and fertilizer use efficiency.

Economic performance of farmers after intervention:

| Sl. No. | Crop | Variety | Area (ha) | Gross Production (q) | Production (q/ha) | Gross Income (Rs/ha) | Net Income (Rs/ha) | B: C Ratio |
|---------|-----------------------|---------------|------------|----------------------|-------------------|----------------------|--------------------|------------|
| 1 | Cotton | Rasahi-659 | 0.4 | 40 | 20 | 142000 | 66400 | 1.88 |
| 2 | Sugarcane | Co. M.-0265 | 0.8 | 1300 | 1625 | 439000 | 236000 | 2.16 |
| 3 | Onion | N-2-4-1 | 1.2 | 360 | 300 | 300000 | 154000 | 2.05 |
| 4 | Onion Seed Production | NHRDF Red-4 | 0.4 | 3 | 7.5 | 82000 | 44000 | 2.16 |
| 5 | Ginger | Mahim | 0.8 | 240 | 300 | 91000 | 54000 | 2.46 |
| 6 | Pomegranate | Phule Bhagawa | 1 | 150 | 150 | 83000 | 485000 | 2.41 |
| | Total | | 4.6 | 2093 | 2402.50 | 3441000 | 1921400 | |

Outcome:

The farmer's income has increased manifold since he adopted the diversification approach/Integrated Farming System (IFS) model in accordance with the guidance of KVK scientists. Changes in the cropping pattern, adoption of crop rotation, and integrated nutrient management along with the application of liquid fertilizers and manures have continuously improved the soil organic carbon content, which increased from 0.30% to 0.70% over these years. This ultimately improved the soil health and was one of the important reasons for the increase in production.

Due to the adoption of the new cropping pattern and improved technologies, the net income of Mr. Jadhav increased by up to four times. Now, the farmer is not only fulfilling his needs but is also earning sufficient income throughout the year.

Impact:

The impact of the farmer is clearly visible in the region, and most farmers consider him a model farmer in the surrounding area. Following the principle of “Seeing is believing,” other farmers are coming forward to adopt IFS models on their farms. His farm has become an exposure visit centre and a “Satellite Centre” for farmers who wish to adopt and propagate the IFS model.

Finally, he has purchased a new four-wheeler by earning income from agriculture over the years.

As the fund flow has increased, he has now constructed a new farm pond for irrigation purposes. Owing to his improved economic condition, Mr. Jadhav has also installed chain-link fencing around his field so that crops are not damaged by wild animals, ultimately resulting in increased yield and income.

Mr. Jadhav is acting as a “Master Trainer” for Krishi Vigyan Kendra, Dahigaon Ne, helping to propagate various technologies smoothly at farmers’ fields.

